

S/N Unknown

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Leonard Forbes et al.

Examiner: Unknown

Serial No.: Unknown

Group Art Unit: Unknown

Filed: Herewith

Docket: 303.324US4

Title: TRANSISTOR WITH VARIABLE ELECTRON AFFINITY GATE AND
METHODS OF FABRICATION AND USE

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3/A 2/13/01

PRELIMINARY AMENDMENT

Commissioner for Patents
Washington, D.C. 20231

When the above-identified patent application is taken up for consideration, please amend the application as follows:

IN THE SPECIFICATION

On page 1, line 5, before "**Field of the Invention**", please insert the sentence, "This application is a continuation of U.S. Serial No. 08/903,452, filed on July 29, 1997.--"

IN THE CLAIMS

Please cancel claims 1-35 without prejudice and add the following new claims 36-100.

36. A transistor comprising:

a source region, a drain region, a channel region between the source and drain regions, and a gate separated from the channel region by an insulator, the gate formed of a silicon carbide compound $\text{Si}_{1-x}\text{C}_x$, wherein x is greater than 0.5 to establish a desired value of a barrier energy between the gate and the insulator.

37. A transistor comprising:

a source region, a drain region, a channel region between the source and drain regions, and a gate separated from the channel region by an insulator, the gate formed of a silicon carbide compound $\text{Si}_{1-x}\text{C}_x$, wherein x is selected at a predetermined value approximately between 0.5 and 1.0 to establish a desired value of a barrier energy between the gate and the insulator.

38. The transistor of claim 36, wherein the value of the barrier energy is approximately between 0 eV and 2.8 eV.